

ABSTRACT

Disclosed is a method for providing a high-speed data service and a voice service in a transmission system employing two binary, one quaternary (2B1Q) modulation/demodulation, the transmission system including a remote terminal providing a high-speed data service, a plurality of user terminals including data service terminals and voice service terminals, and a multi-rate digital subscriber line (MDSL) terminal connected to the remote terminal through a twisted pair line, the multi-rate digital subscriber line terminal being also connected to the user terminals. During a downstream voice service, the remote terminal assembles an high bit rate digital subscriber line (HDSL) frame by including signaling signals for the voice service and signal processing mode information in a user-defined interval of the high bit rate digital subscriber line frame, and transmits the assembled high bit rate digital subscriber line frame to the multi-rate digital subscriber line terminal through the twisted pair line. During an upstream voice service, the remote terminal receives the high bit rate digital subscriber line frame and transmits the signaling signals in the received high bit rate digital subscriber line frame to an exchange.